REMARKS

Introduction

Claims 13-24 are currently pending. Claims 13, 18 and 24 have been amended. For at least the reasons set forth below, Applicant submits that the claims are in condition for allowance.

Rejection of Claims under 35 U.S.C. §102(b)

Claims 13-14 and 24 are rejected under 35 U.S.C. §102(b) as being anticipated by Labedz (U.S. Patent 5,251,233). Applicant respectfully requests that the rejection be withdrawn for the following reasons.

To anticipate a claim under § 102(b), a single prior art reference must identically disclose each and every claim element. See Lindeman Machinenfabrik v. American Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984). If any claimed element is absent from a prior art reference, it cannot anticipate the claim. See Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997). Additionally, not only must each of the claim limitations be identically disclosed, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the inventions of the rejected claims, as discussed above. See Akzo, N.V. v. U.S.I.T.C., 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Independent claim 13 recites, in relevant parts, "determining a first estimation $\hat{h}$ of a pulse response of the memory-enabled transmission channel; performing an estimation of an intensity level σ^2 of an additive interference of the memory-enabled transmission channel; and performing a correction of the first estimation of the pulse response by taking into consideration the estimation of the intensity level σ^2 of the additive interference of the memory-enabled transmission channel, wherein an amount of correction of the first estimation varies depending on the estimated intensity level σ^2 of the additive interference."

Independent claim 24 recites, in relevant parts, "an estimator of <u>an intensity level σ^2 of</u> an additive interference, . . . and a channel estimation correcting element for correcting a signal of the channel estimator <u>by taking into consideration an output signal of the estimator of the intensity level σ^2 of the additive interference of the memory-enabled transmission channel, wherein an amount of correction of the signal varies depending on the estimated intensity level σ^2 of the additive interference</u>."

In support of the present rejection, the Examiner contends the following: a) element 400 in Fig. 4 of Labedz teaches "determining a first estimation of a pulse response of the memory-enabled transmission channel"; b) column 4, lines 5-24 of Labedz teach "performing an estimation of an additive interference of the memory-enabled transmission channel"; and c) column 4, lines 65-68 and elements 400, 420 of Fig. 4 of Labedz teach "performing a correction of the first estimation of the pulse response by taking into consideration the estimation of the additive interference of the memory-enabled transmission channel." However, the Examiner's asserted interpretations of the teachings of Labedz (<u>as applied to the presently amended claimed features</u>) are clearly incorrect, as explained in detail below.

With respect to the disclosure of column 4, lines 5-24 of Labedz, this section merely discusses the **correlation signal C(t)** 505, which are subsequently used to generate the tap coefficients, which are in turn a **channel impulse response (CIR) estimate** (see col. 4, l. 53-58). While column 4, lines 5-24 of Labedz does mention that the "effects of the <u>corruption, and more specifically receiver noise, interference, and cross-correlation products</u> is given by the difference $\Delta C(t)$ between $C_I(t)$ 510 [ideal correlation signal free of multi-path effects] and C(t) 505 as shown in Fig. 5," this section clearly does not suggest "performing an estimation of <u>an intensity level σ^2 of</u> an <u>additive interference of the memory-enabled transmission channel</u>"; instead, the discussion of the difference $\Delta C(t)$ between $C_I(t)$ 510 [ideal correlation signal <u>free of multi-path effects</u>] and C(t) 505 clearly implicates inter-symbol interference (ISI) (see col. 1, l. 33-35), which was explained in the previous Response of 4/18/07 as being completely different from the claimed "estimation of <u>an intensity level σ^2 of</u> an <u>additive interference of the memory-enabled transmission channel</u>."

With respect to the disclosure of column 4, lines 65-68 and elements 400, 420 of Fig. 4 of Labedz, these sections of Labedz clearly do not teach the claimed feature of "performing a correction of the first estimation of the pulse response by taking into consideration the estimation of the intensity level σ^2 of the additive interference of the memory-enabled transmission channel." Col. 4, l. 53-68 of Labedz indicates that the correlation signal C(t) 505 is used to produce "tap coefficients which . . . are a CIR [channel impulse response] estimate at the time the TDMA timeslot 210 was sent," and this "CIR estimate is input into a tap modification block 420," which **tap modification block 420 selectively alters the CIR estimate** to yield a modified and improved CIR estimate and hence, improved tap coefficients used to construct the complex matched filter." However, the subsequent section of Labedz clearly indicates that the tap modification block 420 modifies of the CIR estimate by zeroing the tap coefficients 610 of the sampled CIR estimates 605 which are below a preset minimum magnitude threshold 600, i.e., the samples having tap coefficients 610 below the threshold are "**assumed to be too corrupted**" and are simply **thrown out**. (Col. 4, l. 68 – col. 5, l. 26). Accordingly, the correction of the CIR estimate performed in Labedz clearly does not involve **taking into consideration** any "**estimation**" of the additive interference of the memory-enabled transmission channel"; instead, the correction is based on an **assumption** that the tap coefficients 610 of the sampled CIR estimates 605 which are below a preset minimum magnitude threshold 600 are **too corrupted to be used at all**.

Independent of the above, Labedz clearly does not teach or suggest that "an amount of correction of the signal varies depending on the estimated intensity level σ^2 of the additive interference," since Labedz simply **throws out** the tap coefficients 610 of the sampled CIR estimates 605 which are below a preset minimum magnitude threshold 600 (i.e., tap coefficients 610 which are "**assumed to be too corrupted**"), and there is no determination of any estimated intensity level σ^2 of the additive interference of the memory-enabled transmission channel, let alone any suggestion that correction amount varies "depending on the estimated intensity level σ^2 of the additive interference."

For at least the foregoing reasons, claims 13 and 24, as well as dependent claim 14, are not anticipated by Labedz.

Rejection of Claims under 35 U.S.C. §103(a)

Claims 15-17 and 22-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over combinations of Labedz and Steiner. Withdrawal of the obviousness rejection is requested in view of the following explanation.

In rejecting a claim under 35 U.S.C. §103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091 (Fed. Cir. 1986). Third, the prior art references must teach or suggest all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claims 15-17 and 22-23 ultimately depend on parent claim 13. In addition, as noted above, Labedz clearly does not teach the claimed features of "performing an estimation of an intensity level σ^2 of an additive interference of the memory-enabled transmission channel; and performing a correction of the first estimation of the pulse response by taking into consideration the estimation of the intensity level σ^2 of the additive interference of the memory-enabled transmission channel, wherein an amount of correction of the first estimation varies depending on the estimated intensity level σ^2 of the additive interference." Furthermore, Steiner fails to remedy the deficiencies of Labedz as applied against parent claim 13. Accordingly, Applicant submits that dependent claims 15-17 and 22-23 are not rendered obvious by the combination of Labedz and Steiner.

Claim 21 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Labedz in view of Applicant's Admitted Prior Art ("AAPA"). Withdrawal of the obviousness rejection is requested in view of the following explanation.

Claim 21 depends on parent claim 13. In addition, as noted above, Labedz clearly does not teach the claimed features of "performing an estimation of <u>an intensity level σ^2 of an additive interference of the memory-enabled transmission channel; and performing a correction of the first estimation of the pulse response <u>by taking into consideration the estimation of the intensity level σ^2 of the additive interference of the memory-enabled transmission channel, wherein an amount of correction of the first estimation varies depending on the estimated intensity level σ^2 of the additive interference.</u>" Furthermore, AAPA fails to remedy the deficiencies of Labedz as applied against parent claim 13. Accordingly, Applicant submits that dependent claim 21 is not rendered obvious by the combination of Labedz and AAPA.

<u>Allowable Subject Matter</u>

Examiner objected to claims 18-20 as being dependent upon a rejected base claim, claim 13, but the Examiner also indicated that claims 18-20 contain allowable subject matter. Since the parent claim 13 has been shown to be in allowable condition, Applicant submits that dependent claims 18-20 are allowable in their present dependent form.

Conclusion

In light of the foregoing, Applicant respectfully submits that all of the pending claims 13-24 are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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